



## Product Change Notification / MAAN-12GHBU233

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### Date:

25-Mar-2024

### Product Category:

8-Bit Microcontrollers, Capacitive Touch Sensors

### PCN Type:

Manufacturing Change

### Notification Subject:

CCB 6692 Final Notice: Qualification of MPHL as new final test site for ATTINY20, ATTINY24xx, ATTINY44xx, ATTINY84xx and AT42QT1070 device families available in 14L SOIC (.150in) package.

### Affected CPNs:

[MAAN-12GHBU233\\_Affected\\_CPN\\_03252024.pdf](#)  
[MAAN-12GHBU233\\_Affected\\_CPN\\_03252024.csv](#)

### Notification Text:

**PCN Status:**Final Notification

**PCN Type:**Manufacturing Change

**Microchip Parts Affected:**Please open one of the files found in the Affected CPNs section.  
Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

**Description of Change:**Qualification of MPHL as new final test site for ATTINY20, ATTINY24xx, ATTINY44xx, ATTINY84xx and AT42QT1070 device families available in 14L SOIC (.150in) package.

### Pre and Post Change Summary:

|  | Pre Change | Post Change |
|--|------------|-------------|
|  |            |             |

| Final Test Site              |               | Lingsen Precision Industries, LTD.<br><br>(LPI)                        | Microchip Technology Operations (Philippines) Corporation<br>(MPHL) |
|------------------------------|---------------|------------------------------------------------------------------------|---------------------------------------------------------------------|
| Base Quantity Multiple (BQM) | Tape and Reel | 3000                                                                   | 3000                                                                |
|                              | Tube          | 57                                                                     | 57                                                                  |
| Pin1 Orientation             | Tape and Reel | Quadrant 1                                                             | Quadrant 1                                                          |
|                              | Tube          | See pre and post change summary for comparison.                        |                                                                     |
| Carrier Tape                 |               | With minor dimensional change. See pre and post change for comparison. |                                                                     |
| Cover Tape                   |               |                                                                        |                                                                     |
| Plastic Reel                 | Color         | White                                                                  | White                                                               |
|                              | Dimension     | With dimensional change. See pre and post change for comparison.       |                                                                     |
| Packing Method               |               | See pre and post change for comparison                                 |                                                                     |

**Impacts to Data Sheet:**None

**Change Impact:**None

**Reason for Change:**To improve manufacturability by qualifying MPHL as new final test site.

**Change Implementation Status:**In Progress

**Estimated First Ship Date:**May 06, 2024 (date code: 2419)

Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

**Time Table Summary:**

|                          | February 2024 |    |    |    |    | March 2024 |    |    |    |    | > | May 2024 |    |    |    |    |
|--------------------------|---------------|----|----|----|----|------------|----|----|----|----|---|----------|----|----|----|----|
| Workweek                 | 05            | 06 | 07 | 08 | 09 | 10         | 11 | 12 | 13 | 14 |   | 18       | 19 | 20 | 21 | 22 |
| Initial PCN Issue Date   |               |    | x  |    |    |            |    |    |    |    |   |          |    |    |    |    |
| Qual Report Availability |               |    |    |    |    |            |    |    | x  |    |   |          |    |    |    |    |

|                               |  |  |  |  |  |  |  |  |   |  |  |  |   |  |  |  |
|-------------------------------|--|--|--|--|--|--|--|--|---|--|--|--|---|--|--|--|
| Final PCN Issue Date          |  |  |  |  |  |  |  |  | x |  |  |  |   |  |  |  |
| Estimated Implementation Date |  |  |  |  |  |  |  |  |   |  |  |  | x |  |  |  |

#### Method to Identify Change:

Traceability code

**Qualification Report:** Please open the attachments included with this PCN labeled as PCN\_#\_Qual\_Report.

**Revision History:** February 14, 2024: Issued initial notification.

March 25, 2024: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on May 6, 2024.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

#### Attachments:

[PCN\\_MAAN-12GHBU233\\_Pre and Post Change Summary.pdf](#)

[PCN\\_MAAN-12GHBU233\\_Qual\\_Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

ATTINY44A-SSNR  
ATTINY44A-SSURB09  
ATTINY44A-SSURA0  
ATTINY24-20SSUR  
ATTINY24V-10SSUR  
ATTINY84A-SSU  
ATTINY84A-SSUR  
ATTINY84A-SSFRA0  
ATTINY44-20SSU  
ATTINY44V-10SSU  
ATTINY24A-SSF  
ATTINY20-SSU  
ATTINY44-20SSUR  
ATTINY44V-10SSUR  
ATTINY44-20SSURA0  
ATTINY84-20SSU  
ATTINY24-20SSU  
ATTINY24V-10SSU  
ATTINY24A-SSN  
ATTINY24A-SSNR  
ATTINY84-20SSUR  
ATTINY24A-SSUR880  
ATTINY24A-SSURA0  
AT42QT1070-SSUR  
ATTINY20-SSUR  
ATTINY84V-10SSU  
ATTINY84V-10SSUR  
ATTINY44A-SSN  
ATTINY24A-SSFR



**QUALIFICATION REPORT SUMMARY**  
**RELIABILITY LABORATORY**

**PCN #: MAAN-12GHBU233**

**Date:**  
**March 07, 2024**

**Qualification of MPHL as new final test site for ATTINY20,  
ATTINY24xx, ATTINY44xx, ATTINY84xx and AT42QT1070  
device families available in 14L SOIC (.150in) package.**



**MICROCHIP**  
PACKAGE QUALIFICATION REPORT

**Purpose**      Qualification of MPHL as new final test site for ATTINY20, ATTINY24xx, ATTINY44xx, ATTINY84xx and AT42QT1070 device families available in 14L SOIC (.150in) package.

**CCB No.**      6692

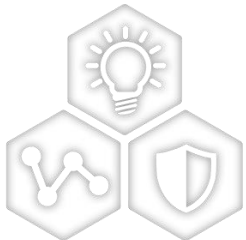
| Test / Evaluation           | Test Condition / Parameters                                                                                                                                                                          | Results |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Datalog / Bin Comparison    | <ul style="list-style-type: none"><li>• Compare test numbers, test names, test sequence bin assignments &amp; pass/fail results.</li><li>• Accept if all match or justify the differences.</li></ul> | Passed  |
| Site by Site Verification   | <ul style="list-style-type: none"><li>• Verifies the channel map has the correct site assignments and tester/handler communications work correctly</li></ul>                                         | Passed  |
| Correlation Lot Report      | <ul style="list-style-type: none"><li>• Yield comparison between systems and test sites. Accept on yield match within 0.1%</li></ul>                                                                 | Passed  |
| Test Stability Verification | <ul style="list-style-type: none"><li>• 50 loop test performed with no datalog delays.</li><li>• Accept on 0 fails</li></ul>                                                                         | Passed  |

**CCB 6692**  
**Pre and Post Change Summary**  
**PCN #: MAAN-12GHBU233**



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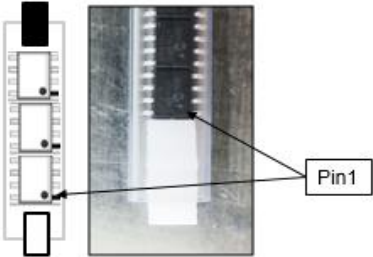
# Pre and Post Change Summary

## Tape and Reel

| Test Site | Pin 1 Orientation                                                                                                                                                                                                                      | Base Quantity Multiple (BQM) |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| LPI       | <div><div><div>Media</div><div>Pin1 Side</div></div><div><div>T/R</div><div><div>Carrier Tape</div><div><div><div>1</div><div>2</div><div>3</div><div>4</div></div><div>Quadrant 1</div></div></div></div></div> <div>Quadrant 1</div> | 3000                         |
| MPHL      | <div><div><div>Media</div><div>Pin1 Side</div></div><div><div>T/R</div><div><div>Carrier Tape</div><div><div><div>1</div><div>2</div><div>3</div><div>4</div></div><div>Quadrant 1</div></div></div></div></div> <div>Quadrant 1</div> | 3000                         |

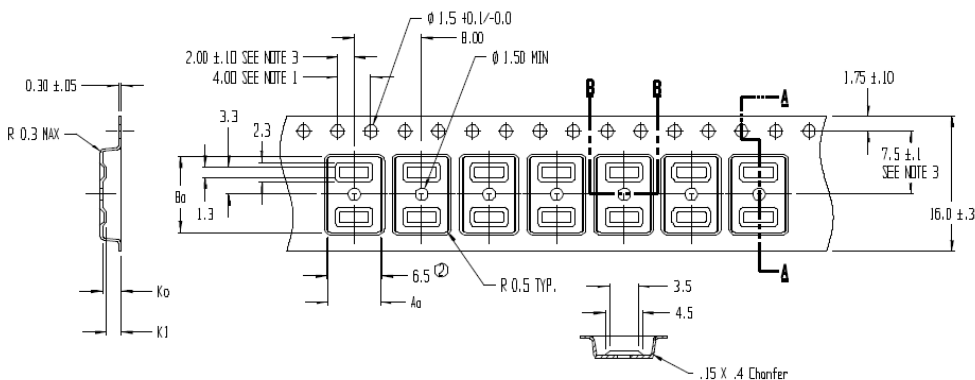
# Pre and Post Change Summary

Tube

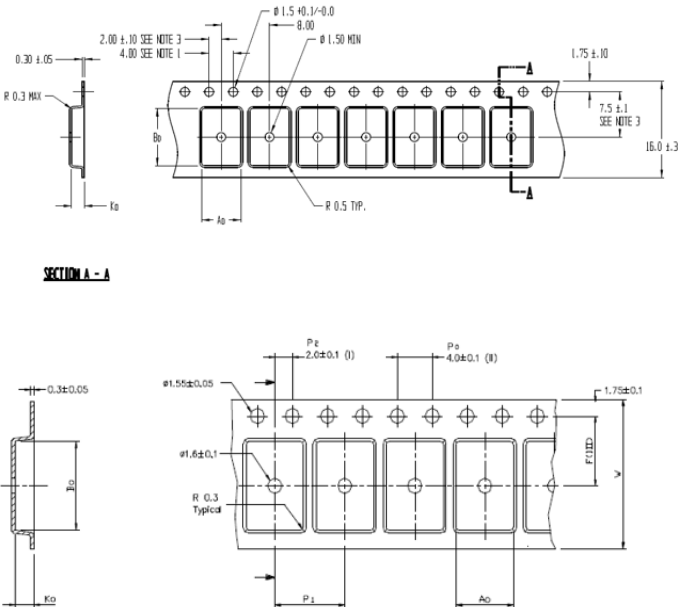
| Test Site | Pin 1 Orientation                                                                                  | Base Quantity Multiple (BQM) |
|-----------|----------------------------------------------------------------------------------------------------|------------------------------|
| LPI       | <br>Green Side  | 57                           |
| MPHL      | <br>White Side | 57                           |

# Pre and Post Change Summary - Carrier Tape – T/R

## LPI



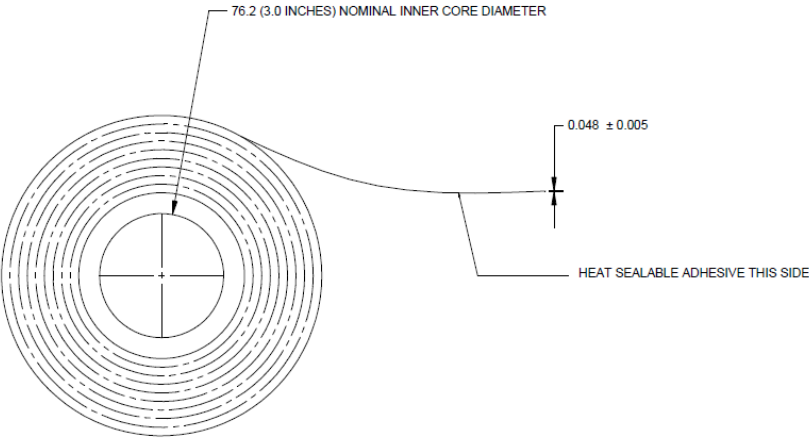
## MPHL



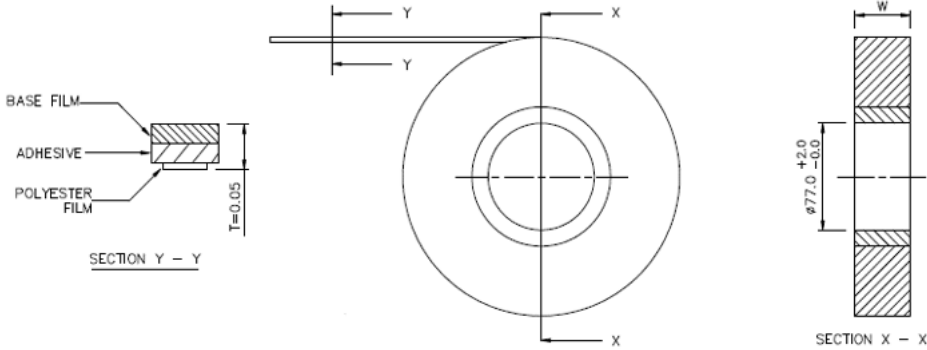
| Plant | Width (mm) | Pitch (mm) | A0 (mm) | B0 (mm) | K0 (mm) |
|-------|------------|------------|---------|---------|---------|
| LPI   | 16         | 8          | 6.5     | 9       | 2.2     |
| MPHL  | 16         | 8          | 6.5     | 9.5     | 2.1     |
|       | 16         | 8          | 6.55    | 9.5     | 2.1     |

# Pre and Post Change Summary – Cover Tape – T/R

LPI



MPHL



| Plant | Width (mm) | Thickness (mm) | Sealing Method |
|-------|------------|----------------|----------------|
| LPI   | 13.3±0.1mm | 0.048 ± 0.005  | Heat Seal      |
| MPHL  | 13.3±0.1mm | 0.05 ± 0.005   | Pressure Seal  |

# Pre and Post Change Summary - Plastic Reel – T/R

| LPI                                                                                | MPHL                                                                                |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |

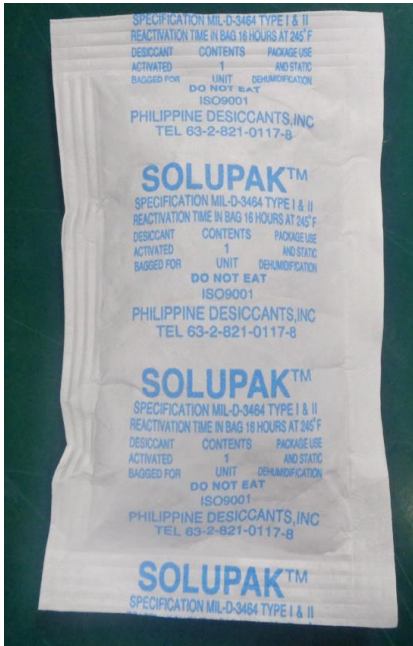
| Plant | Reel Diameter (mm) | Reel Hub Size (mm) | W1 (mm) | W2 (mm) | Color |
|-------|--------------------|--------------------|---------|---------|-------|
| LPI   | 330                | 100                | 4.4     | 7.1     | White |
| MPHL  | 330                | 100                | 17.5    | 21.5    | White |

# Pre and Post Change Summary - Desiccant – T/R

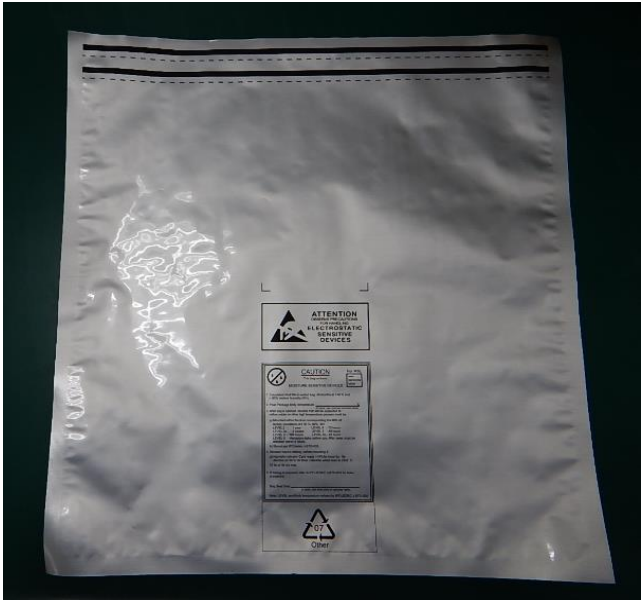
LPI



MPHL



# Pre and Post Change Summary - Antistatic Shielding Bag/Moisture Barrier Bag – T/R

| LPI                                                                               | MPHL                                                                                |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |

| Plant | Length (mm) | Width (mm) |
|-------|-------------|------------|
| LPI   | 450         | 420        |
| MPHL  | 406.4       | 457.2      |

# Pre and Post Change Summary – Carton Box – T/R

## LPI



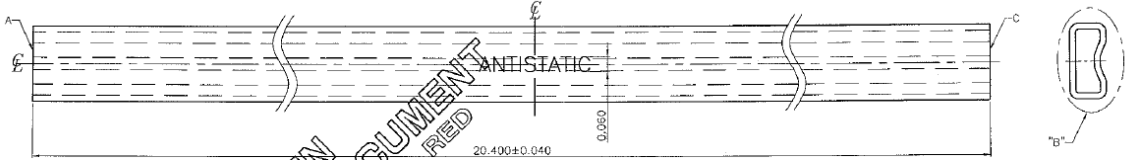
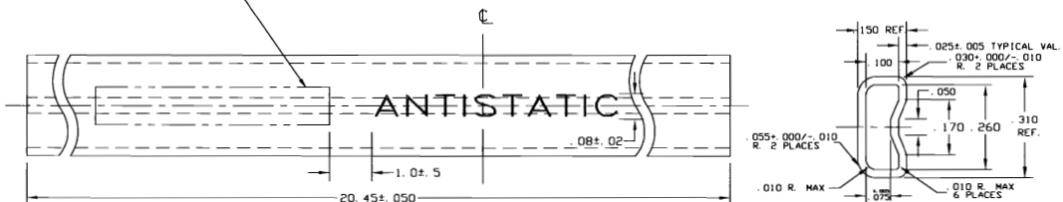
## MPHL



| Length (mm) | Width (mm) | Height (mm) |
|-------------|------------|-------------|
| 370         | 384        | 110         |
| 370         | 384        | 225         |
| 370         | 390        | 390         |

| Length (mm) | Width (mm) | Height (mm) |
|-------------|------------|-------------|
| 375         | 352        | 53          |

# Pre and Post Change Summary - Tube

| LPI                                                                                                                                                                                                                                                                                                                                                                             | MPHL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Technical drawing of LPI tube. The main view shows a tube with a length dimension of 20.400 ± 0.040 and a width dimension of 0.0250. A cross-section view labeled 'B' shows a rectangular profile. The word 'ANTISTATIC' is printed on the tube. A diagonal stamp reads 'CURRENT RED'.</p> |  <p>Technical drawing of MPHL tube. The main view shows a tube with a length dimension of 20.45 ± 0.050 and a width dimension of 0.08 ± 0.02. A cross-section view shows a rectangular profile with dimensions: 1.0 ± 0.5, 0.055 ± 0.000/-0.010 R. 2 PLACES, 0.025 ± 0.005 TYPICAL VAL. R. 2 PLACES, 0.30 ± 0.000/-0.010, 0.050, 1.70, 2.60, 0.310 REF., 0.010 R. MAX 6 PLACES, 0.075. The word 'ANTISTATIC' is printed on the tube.</p> |

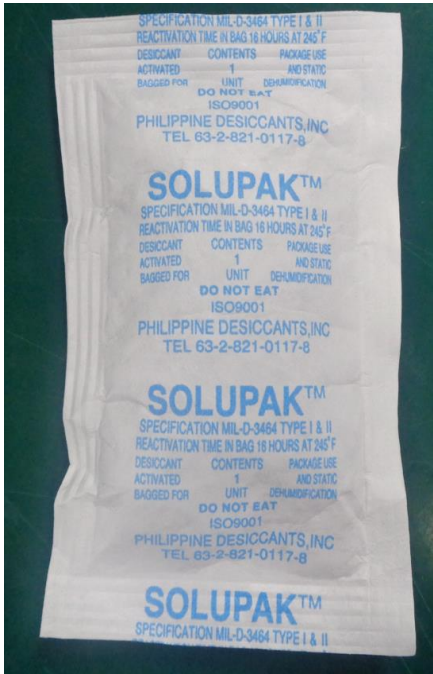
| Plant | Length (inch)  | Width (inch)    | Color |
|-------|----------------|-----------------|-------|
| LPI   | 20.40 +/- 0.04 | 0.310 +/- 0.005 | Clear |
| MPHL  | 20.45 +/- 0.05 |                 | Clear |

# Pre and Post Change Summary - Desiccant – Tube

LPI



MPHL



# Pre and Post Change Summary - Antistatic Shielding Bag/Moisture Barrier Bag – Tube

| LPI                                                                                                                                                                                                                                                                        | MPHL                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><p>TUBE</p></div> | <div></div> |

| Plant | Length (mm)              |     | Width (mm) | Thickness (mm) |
|-------|--------------------------|-----|------------|----------------|
| LPI   | Vacuum Aluminum Foil Bag | 255 | 764        | 0.15           |
|       | Black conductive bag     | 210 | 770        | 0.08           |
| MPHL  | 680                      |     | 230        | N/A            |
|       | 760                      |     | 230        | N/A            |

# Pre and Post Change Summary – Carton Box – Tube

LPI



MPHL



| Length (mm) | Width (mm) | Height (mm) |
|-------------|------------|-------------|
| 600         | 430        | 188         |
| 600         | 280        | 105         |

| Length (mm) | Width (mm) | Height (mm) |
|-------------|------------|-------------|
| 370         | 380        | 110         |